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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,931	10/27/2003	Yuka Utsumi	500.40673CX1	2134

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EXAMINER	
CHOWDHURY, TARIFUR RASHID	
ART UNIT	**PAPER NUMBER**
2871	

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/692,931	UTSUMI ET AL.	
	Examiner	Art Unit	
	Tarifur R Chowdhury	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/956,138.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/956,138, filed on 09/20/01. ***Specification***

2. The disclosure is objected to because of the following informalities:

In page 1 of the specification, the continuation information should be updated.

Appropriate correction is required.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-9, 12-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu, US 2001/0002146 in view of Lee, US 2001/0038425.

4. Komatsu discloses and shows in Figs. 3a and 6b, a liquid crystal display for displaying an image to be visible for a viewer, comprising:

- a liquid crystal (130);
- a pair of electrodes (108, 109) for controlling an orientation of at least a part of the liquid crystal in accordance with an electric field between the electrodes;
- a light source (148) for generating a light to be transmitted through the liquid crystal to the viewer;
- a pair of first and second polarize plates (135, 136), the first polarizer plate (135) arranged between the liquid crystal and the light source, and the second polarizer plate (136) being arranged between the liquid crystal and the viewer.

Komatsu differs from the claimed invention because he does not explicitly disclose a band-pass filter that absorbs a component of light, a wavelength of which component is not more than 440 nm, and is arranged between the light source and the viewer.

Lee shows a filter that is placed between a light source and a viewer (Fig. 2). Lee also discloses that filters are useful for filtering out predetermined wavelengths of light emitted by a light source (paragraph 0008). Lee also discloses that filters (240) filters

out undesirable wavelengths of light by preventing light wavelength exceeding a predetermined wavelength from passing through the filter (paragraph 0022).

Lee is evidence that ordinary workers in the art of liquid crystal would find a reason, suggestion or motivation to place a filter between the light source and the viewer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of Komatsu such that employing a filter (applicant's band-pass filter) between the light source and the viewer so that undesirable wavelengths of light (such as less than 440 nm) is absorbed by the filter and a display with better contrast is obtained.

Lee also shows that the filter is arranged between the light source and the light guide.

Accordingly, claims 1, 2, 4, 5, 14 and 16 would have been obvious.

As to claim 3, it is known in the art to use diffusers for several reason such as to increase viewing angle. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ a diffuser between the light guide and the liquid crystal to improve viewing angles of the display.

As to claim 6, Komatsu shows in Fig. 3a that display further comprising a pair of transparent substrates (110, 111), wherein the liquid crystal (130) is arranged between the first and second transparent substrates.

As to claim 7, Komatsu shows in Fig. 3a that a color filter (129) is provided on the substrate (11) for transmitting therethrough a blue light (primary color), wherein the portion includes an agent for absorbing the component of the light.

As to claim 8, employing the band-pass filter on at least one of the polarizer plates is considered as intended use for varying the wavelength and thus would have been obvious.

As to claim 9, it is common and known in the art that band-pass filters containing stack of layers are effective in size reduction and thus would have been obvious.

As to claim 12, Lee discloses that the light source includes fluorescent substance for generating the light.

As to claim 13, it is clear from Fig. 6b of Komatsu that the liquid crystal and the pair of polarizer plates forms a normally close type liquid crystal display unit.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu and Lee in view of Teng et al., (Teng), USPAT 5,834,122.

8. Komatsu when modified by Lee differ from the claimed invention because it does not explicitly disclose that the band-pass filter is a polymer.

9. Teng discloses a band-pass filter that includes polymer (col. 3, lines 47-49). Teng also discloses that such a filter enhances contrast of an image without significantly affecting the brightness and resolution of the image (col. 3, lines 1-3).

Teng is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use a polymer band-pass filter.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display of Komatsu when modified by Lee by using a polymer band-pass filter so that contrast of the image is enhanced without significantly affecting the brightness and resolution of the image, as per the teachings of Teng.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu and Lee and in view of Sunamori et al., (Sunamori), USPAT 5,568,267.

11. Komatsu and Lee differ from the claimed invention because they do not explicitly disclose that the band-pass filter is a resin including an agent for absorbing the component of the light.

Sunamori discloses a band-pass filter that is a resin including an agent for absorbing the component of light (col. 4, lines 10-15). Sunamori also discloses that a resin band-pass filter is advantageous since it shows high transparency (col. 2, lines 64-65).

Sunamori is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use a resin band-pass filter.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display of Komatsu when modified by Lee by using a resin band-pass filter so that higher transparency is obtained, as per the teachings of Sunamori.

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu and Lee and in view of Kanzaki et al., (Kanzaki), JP 2-97992.

13. Komatsu when modified by Lee differ from the claimed invention because they do not explicitly disclose the use of super twisted nematic liquid crystal.

Kanzaki discloses a liquid crystal display using super twisted nematic liquid crystal. Kanazaki also discloses that using super twisted nematic liquid crystal provides an image with good display contrast (abstract).

Kanzaki is evidence that ordinary workers in the art would find a reason,

suggestion or motivation to use super twisted nematic liquid crystal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of Komatsu when modified by Lee by using super twisted nematic liquid crystal so that an image with good display contrast is obtained, as per the teachings of Kanzaki.

Accordingly, claim 15 would have been obvious.

As to claim 15, using super twisted nematic liquid crystal as a liquid crystal material for a liquid crystal display is common and known in the art and thus would have been obvious to avail a proven material.

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 1-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,646,699. Although the conflicting claims are not identical, they are not patentably

distinct from each other because the claims of the instant invention are in fact broader than the patented claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC
March 03, 2004

TARIFUR R. CHOWDHURY
PRIMARY EXAMINER